24 CATHINONE METHODOLOGY

24.1 Scheduling:

24.1.1 Schedule I – cathinone, which is found in *Catha Edulis* (Khat)

24.1.2 The chemical, rather than the botanical, is controlled.

24.2 Sample Handling:

24.2.1 Suspected samples of Khat should be analyzed as soon as possible and the samples should be refrigerated, if possible.

24.2.2 Cathinone degrades into cathine, a schedule IV substance.

24.3 Extraction:

24.3.1 Suggested *Catha Edulis* (Khat) Extraction Technique

- Cut up approximately 5 grams of leaves and stems.
- Homogenize (blender or bio-homogenizer) for 5 minutes in 100 mL of 0.1N HCl.
- Filter off insoluble material.
- Basify acid solution with 1N NaOH to pH 11-12.
- Extract basic solution with aliquots of $CHCl_3$.
- Evaporate combined $CHCl_3$ aliquots with air (very low heat).
- Analyze residue ASAP or refrigerate to avoid degradation.
- Residue will give Cathinone and Cathine.

24.4 TLC:

24.4.1 Baths: TLC1, TLC2, TLC3, TLC4 and TLC5 are recommended.

24.4.2 Detection Spray: Ninhydrin/heat gives red-brown color.

24.5 References:

24.5.1 Morselli *et al.*, "Gas-Chromatography/Mass Spectrometry Determination of the Active Principles of (Catha Edulis) African Vegetable**,"** *Microgram*, Vol. XXV, No. 11, November 1992, pp. 290-294.

24.5.2 Lee, M. M., "The Identification of Cathinone in Khat (Catha edulis): A Time Study," *Journal of Forensic Sciences*, JFSCA, Vol. 40, No. 1, January 1995, pp. 116-121.

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